

A NEW SUBSPECIES OF THE HORSESHOE BAT, *HIPPOSIDEROS DIADEMA*

FROM THE NORTHERN TERRITORY, AUSTRALIA

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INTRODUCTION

Hill (1963) recognizes 16 subspecies of *Hipposideros diadema* (Geoffroy). An additional subspecies has been recently described from the Solomons (Phillips, 1967). The species ranges from the Asiatic mainland eastwards to the Solomon Islands.

During September 1969, 13 specimens of a distinctive new subspecies were collected in the Arnhem Land area of Northern Territory by B. Bolton, D. Howe, and S. A. Parker of the Animal Industry Branch, Northern Territory Administration. Until then it was thought that *H. diadema* was found in Australia only in north-eastern Queensland.

Family RHINOLOPHIDAE

Subfamily HIPPOSIDERINAE

Hipposideros diadema inornatus new subspecies

Type Specimen

Northern Territory Museum, Animal Industry Branch, Northern Territory Administration, No. 4596; male skin and skull; collected September 12, 1969, by B. Bolton, D. Howe, and S. A. Parker.

Type Locality

Deaf Adder Creek, where it emerges from the Arnhem Land Plateau, 55 miles due south of Oenpelli, N.T., lat. 13° 06' S. long. 132° 56' E. The bats were captured in mist-nets set amongst tall *Melaleuca* by a waterhole at the mouth of a sandstone gorge. Other species of bats collected in the same area were *Macroderma gigas saturata* A. M. Douglas, *Hipposideros stenotis* Thomas, *Hipposideros ater arneusis* Gray, *Taphozous flaviventris* Peters, *Taphozous georgianus troughtoni* Tate, *Miniopterus schreibersi oriauae* Thomas, and *Eptesicus pumilus caurius* Thomas.

Description

Size small for the species, pelage soft (10 mm. on neck, 15 mm. on back), pale brown tipped somewhat darker brown. The noseleaf is normal for the species as is the skull except that cranial crests and frontal depression are not well developed.

No specimens that I have examined of the other Australian race *Hipposideros diadema reginae* Troughton have a pelage colour as pale as *inornatus*. As with *reginae*, the strongly marked dorsal patches and stripes of *Hipposideros diadema pullatus* Andersen from New Guinea are lacking. *H.d. inornatus* does not possess the pale buffy spot behind the shoulders present in some specimens of *reginae*.

Hill (1963) and Phillips (1967) provide comparative measurements of the other subspecies of *H. diadema*. *H. d. inornatus* differs from all subspecies in its smaller size except *Hipposideros diadema nitrandus* Thomas from Manus Island, Admiralty Islands, and *Hipposideros diadema demissus* Andersen from San Cristoval Island, east Solomon Islands. However, the condyloacanine length and maxillary tooth row of *nitrandus* are longer, and the interorbital breadth smaller on the average. *H. d. inornatus* differs from *demissus* in its lack of dorsal markings, its larger zygomatic breadth, and smaller maxillary tooth row. Were it not for the presence of these two other small forms on east Solomon Islands, and the Admiralty Group, it would be tempting to regard *inornatus* as a full species. It would be interesting to know whether the cranial crests of any of the other 17 subspecies are so poorly developed as that of *inornatus*.

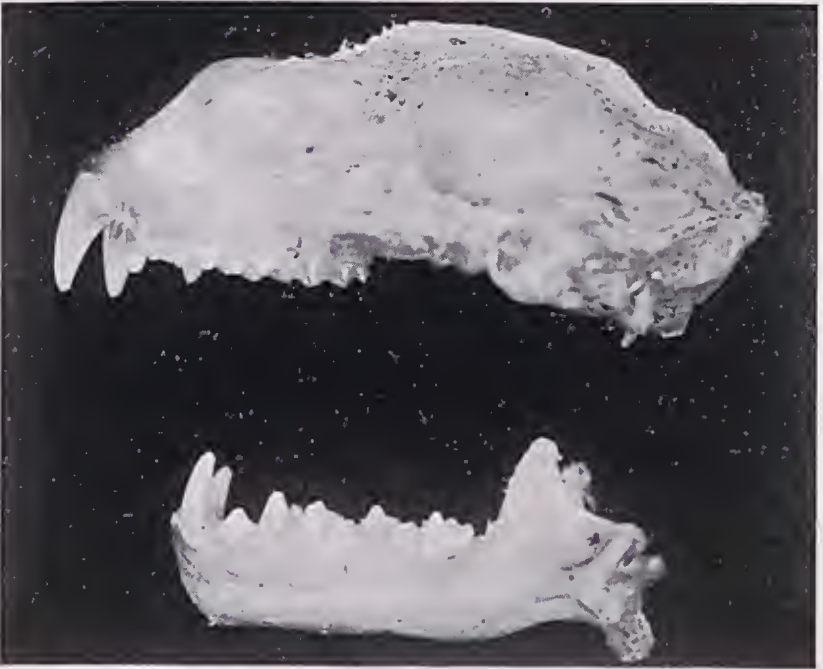
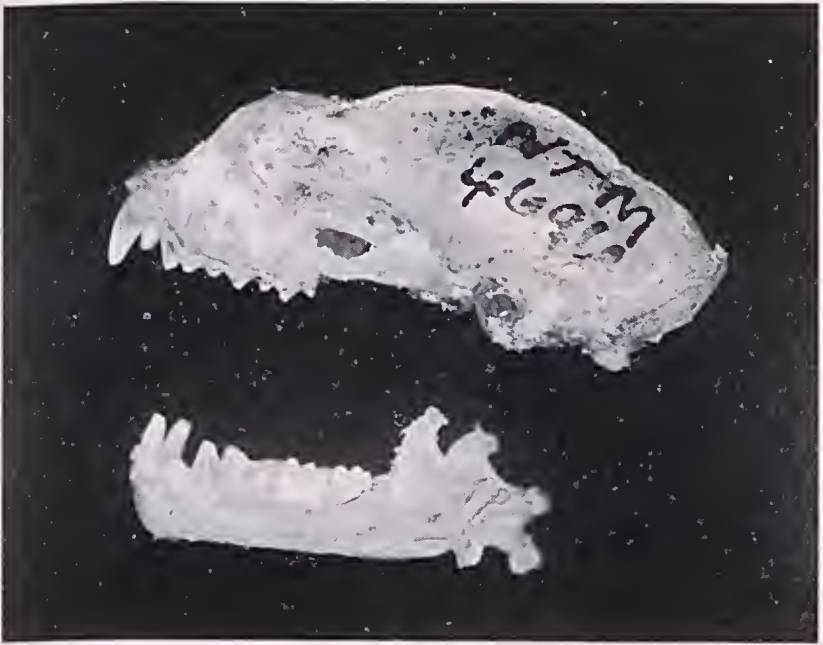


Fig. 1.—Skull of holotype of *Hipposideros diadema inornatus* (upper); skull of *Hipposideros diadema reginae* (lower).—Photographs Ederic Slater

Measurements of the type and other specimens are given in Table 1. There was no apparent difference in size between the sexes. The skulls of the holotype of *H. d. inornatus* and C.S.I.R.O. MH808, a specimen of *H. d. reginae* from Iron Range, Cape York, Queensland, are illustrated in Figure 1.

Specimens examined

A total of 13, all collected at Deaf Adder Creek, 55 miles south of Oenpelli, Northern Territory, during September 1969: the type, ten other skins and skulls, three ♂♂ (N.T.M. No. 4701, C.S.I.R.O. Nos. CM4275, CM4277), seven ♀♀ (N.T.M. Nos. 4689, 4693, 4694, 4700, 4721, C.S.I.R.O. Nos. CM4273, CM4276), one ♂ (C.S.I.R.O. No. CM4273), and one ♀ (N.T.M. No. 4695) in alcohol.

ACKNOWLEDGEMENTS

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REFERENCES

- HILL, J. E. 1963. A Revision of the Genus *Hipposideros*. *Bull. Brit. Mus. (Nat. Hist.)*, 11: 1-129.
 PHILLIPS, Carleton J. 1967. A new subspecies of Horseshoe Bat (*Hipposideros diadema*) from the Solomon Islands. *Proc. Biol. Soc. Wash.*, 80: 35-39.

TABLE 1.—MEASUREMENTS OF HOLOTYPE AND OTHER SPECIMENS OF *HIPPOSIDEROS DIADEMA INORNATUS* new s. sp. IN MILLIMETRES AND GRAMS

Measurements	Holotype	Other Specimens			
	NTM 4696	Minimum	Maximum	Mean	Number measured
Total length	118.0	110.0	121.0	116.3	13
Tail	41.6	32.0	45.6	39.0	13
Wingspan	405.0	387.0	441.0	415.0	12
Forearm	71.1	68.4	73.3	70.9	13
Tibia	29.5	28.5	30.9	29.6	13
Hindfoot with claw	14.0	13.2	14.8	13.8	13
Ear length	25.3	23.2	26.6	25.1	12
Ear breadth	20.9	18.6	22.4	20.7	13
Noseleaf length	14.4	12.9	14.9	13.8	13
Noseleaf breadth (main leaf)	9.2	8.2	9.9	9.3	13
Weight	28.5	23.0	29.0	25.9	13
Skull, greatest length	28.0	26.9	28.2	27.6	11
Greatest length to canine	26.3	25.7	26.9	26.3	11
Condylbasal length	25.1	24.1	25.3	24.9	11
Condylocanine length	23.7	22.9	23.7	23.3	11
Zygomatic breadth	15.8	15.2	16.0	15.6	11
Interorbital breadth	3.7	3.1	3.8	3.5	11
Braincase breadth	11.0	10.6	11.4	10.9	11
Braincase depth	8.2	8.2	8.9	8.5	11
Palatal breadth	10.7	10.1	10.8	10.6	11
Post palatal length	13.6	12.8	13.6	13.0	11
Maxillary tooth row	9.8	9.1	9.9	9.7	11
Lower jaw, C-M ₃	11.8	11.1	12.0	11.5	11